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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

RE APPLICATION OF : Minako HIJIKATA, et al.

SERIAL NUMBER: 09/813,990

: GROUP: 1634

FILED: March 22, 2001

: EXAMINER: A. K. CHAKRABARTI

FOR: GENETIC POLYMORPHISM OF MXA PROTEIN AND USE THEREOF

LETTER

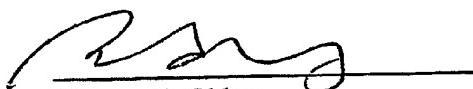
Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Submitted herewith is a European Search Report for the Examiner's consideration. The references cited therein have been filed in the U.S. Patent and Trademark Office on March 22, 2001 and October 21, 2002.

Respectfully submitted,

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NO. 6362 P. 3/9



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02.10.02

Zeichen/Ref./Ref.

EPP83717

Anmeldung Nr./Application No./Demande n°./Patent Nr. /Patent No./Brevet n°.
01302708.1-1222-

Anmelder/Applicant/Demandeur/Patentinhaber/Propriétaire/Titulaire
KABUSHIKI KAISHA TOSHIBA

COMMUNICATION

The European Patent Office herewith transmits as an enclosure the European search report for the above-mentioned European patent application.

If applicable, copies of the documents cited in the European search report are attached.

- Additional set(s) of copies of the documents cited in the European search report is (are) enclosed as well.

The following specifications given by the applicant have been approved by the Search Division:

abstract

title

- The abstract was modified by the Search Division and the definitive text is attached to this communication.

The following figure will be published together with the abstract NONE



REFUND OF THE SEARCH FEE

If applicable under Article 10 Rules relating to fees, a separate communication from the Receiving Section on the refund of the search fee will be sent later.



European Patent
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PARTIAL EUROPEAN SEARCH REPORT

Application Number

which under Rule 45 of the European Patent Convention EP 01 30 2708
shall be considered, for the purposes of subsequent
proceedings, as the European search report

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IMCL7)
X	RONNI ET AL.: "The proximal interferon-stimulated response elements are essential for interferon responsiveness: a promoter analysis of the antiviral MxA gene" JOURNAL OF INTERFERON AND CYTOKINE RESEARCH, vol. 18, no. 9, 1998, pages 773-781, XP002212566 * figures 1,3,5 *	1,5, 11-13, 15-17	C12Q1/68 C12Q1/70 A61K48/00 A01K67/027 C12N15/63 C07K14/47
X	CHANG ET AL.: "Molecular and functional analysis of the virus and interferon-inducible human MxA promoter" ARCH VIROL, vol. 117, 1991, pages 1-15, XP002212567 * figures 2A,,4 *	2,5, 11-13, 15-17 -/-	
			TECHNICAL FIELDS SEARCHED (IMCL7)
INCOMPLETE SEARCH			
The Search Division considers that the present application, or one or more of its claims, does not comply with the EPC to such an extent that a meaningful search into the state of the art cannot be carried out, or can only be carried out partially, for these claims.			
Claims searched completely:			
Claims searched incompletely:			
Claims not searched:			
Reason for the limitation of the search:			
see sheet C			
2			
Place of search		Date of completion of the search	
THE HAGUE		18 September 2002	
Examiner		Bort, S	
CATEGORY OF CITED DOCUMENTS			
X - particularly relevant if taken alone Y - particularly relevant if combined with another document of the same category A - technological background D - non-written disclosure P - intermediate document			
T - theory or principle underlying the invention E - earlier patent document, but published on, or after the filing date D - document cited in the application L - document cited for other reasons & - member of the same patent family, corresponding document			



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PARTIAL EUROPEAN SEARCH REPORT

Application Number
EP 01 30 2708

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.)
			TECHNICAL FIELDS SEARCHED (Int.Cl.)
X	DATABASE EMBL 'Online! Homo sapiens (subclone H8_4_b9 from P135 H5 C8), 7 September 1994 (1994-09-07) MARTIN ET AL.: "Sequencing of the Mx1 region of the human chromosome 21" Database accession no. L35661 XP002212569 * abstract *	2,5,11, 12,17	
X	DATABASE EMBL 'Online! Homo sapiens chromosome 21, P1 clone LBL#8, 4 September 1998 (1998-09-04) KIMMERLY ET AL.: "Sequencing of human chromosome 21" Database accession no. AC005612 XP002212570 * abstract *	2,5,11, 12,17	
X	DATABASE EMBL 'Online! M. musculus mRNA for 3'-5' exonuclease, 17 March 1997 (1997-03-17) BASHKIROV ET AL.: Database accession no. X91617 XP002212571 * abstract *	3,11,12, 17	
X	DATABASE EMBL 'Online! 4 July 1999 (1999-07-04) IWASHITA ET AL.: "5'-flanking region of R-ras GTPase activating protein" Database accession no. AB021982 XP002212572 * abstract *	4,11,12, 17	
		-/-	

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R-125 U-783

NO. 6362 P. 6/9



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PARTIAL EUROPEAN SEARCH REPORT

Application Number

EP 01 30 2708

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.)
			TECHNICAL FIELDS SEARCHED (Int.Cl.)
A	KIKUCHI ET AL.: "The effect of HLA alleles on response to interferon therapy in patients with chronic hepatitis C" EUROPEAN JOURNAL OF GASTROENTEROLOGY AND HEPATOLOGY, vol. 10, no. 101, October 1998 (1998-10), pages 859-863, XP002212568 * abstract *	6-10,14	
A	WO 94 02606 A (US HEALTH) 3 February 1994 (1994-02-03) * claim 28 *	6-10,14	
A	WO 95 28492 A (LIGAND PHARM INC) 26 October 1995 (1995-10-26) * page 14, line 1-20 *	6-10,14	
A	WO 90 14593 A (UNIV TEXAS) 29 November 1990 (1990-11-29) * claim 24 *	6-10,14	
T	HIJIKATA ET AL.: "Identification of a single nucleotide polymorphism in the MxA gene promoter (G/T at nt -88) correlated with the response of hepatitis C patients to interferon" INTERVIROLOGY, vol. 43, April 2000 (2000-04), pages 124-127, XP002212856 * abstract *	1-17	

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R-125 U-783
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INCOMPLETE SEARCH
SHEET C

Application Number

EP 01 30 2708

Although claim 14 is directed to a method of treatment of the human/animal body (Article 52(4) EPC), the search has been carried out and based on the alleged effects of the polynucleotide(s).

Claim(s) searched completely:
1-13, 15-17

Claim(s) searched incompletely:
14

Reason for the limitation of the search (non-patentable invention(s)):
Article 52 (4) EPC - Method for diagnostic/treatment of the human or animal body

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R-125 U-103
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ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.

EP 01 30 2708

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

18-09-2002

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 9402606	A	03-02-1994	AU WO	4778193 A 9402606 A1	14-02-1994 03-02-1994
WO 9528492	A	26-10-1995	US AU AU CA EP JP WO AU AU CA EP JP WO	5707803 A 681025 B2 2287695 A 2182561 A1 0755453 A1 9511908 T 9528492 A1 2285995 A 9713798 A 2165057 A1 0722497 A1 9500026 T 9528482 A2	13-01-1998 14-08-1997 10-11-1995 26-10-1995 29-01-1997 02-12-1997 26-10-1995 10-11-1995 11-02-1999 26-10-1995 24-07-1996 07-01-1997 26-10-1995
WO 9014593	A	29-11-1990	AU WO	5350190 A 9014593 A1	18-12-1990 29-11-1990

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ABSTRACT / ZUSAMMENFASSUNG / ABREGE

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The present invention provides polynucleotides comprising SEQ ID Nos. 1 to 4. These polynucleotides have a polymorphism which can be used for the prediction of validity of interferon therapy individuals infected with the hepatitis C virus. The present invention also provides vectors and methods using these polymorphic polynucleotides for gene therapy and for the generation of non-human transgenic animals.